

**REMARKS**

Claims 47-56 and 118-121 are pending in the present application. Claims 47, 119, and 120 have been amended. The amendments do not add new matter and find support throughout the specification and claims. The amendments simplify issues for appeal, do not require additional search, and/or place the claims in condition for allowance. Therefore, it is respectfully requested that the amendments be entered. Additionally, Applicants respectfully request that the finality of the rejection be withdrawn since the rejections of claims 50, 55, and 121 do not respond to the arguments for allowability presented in the previous Amendment. In view of the amendments and following remarks, reconsideration and allowance of the present application is respectfully requested.

Initially, United States Patent No. 6,211,035 to Moise et al. (hereinafter Moise), used in the 35 U.S.C. §103(a) rejection of claims 50 and 55, is not prior art with respect to the present application, as previously argued in the amendments filed on September 17, 2003, July 28, 2004, October 20, 2004, and November 29, 2005. Applicants respectfully request that this rejection be withdrawn, and that these claims be allowed. Alternatively, Applicants respectfully request that the finality of the rejection be withdrawn.

Claim 50 is objected to as failing to further limit the subject matter of a previous claim. Applicants respectfully traverse on the basis that claim 50 further limits the features of claim 47 by specifying that nitrogen dioxide is included in the oxidizing gas, while claim 47 merely indicates that at least one of the three compounds listed (two compounds, as amended) is necessarily present in the claimed oxidizing gas. Therefore,

claim 47 indicates only that nitrogen dioxide may be present, and if it is not present, then ozone is present (as amended). Claim 50, in contrast, recites that nitrogen dioxide is necessarily present. Claim 50 does further limit its base claim, and therefore it is respectfully requested that the objection be withdrawn.

Claims 47-49, 51-54, and 118-120 remain rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,006,363 to Fujii et al. (hereinafter Fujii). Applicants respectfully traverse.

Claim 47 relates to a vapor phase growth method of a metal oxide dielectric film on a substrate by a thermal CVD method using organometal gases. The method of claim 47 includes carrying out film formation by introducing the organometal gases and an oxidizing gas into a vacuum chamber through separate introduction inlets while heating the substrate set in the vacuum chamber and keeping the total pressure of the vacuum chamber at  $1 \times 10^{-2}$  Torr or lower. In amended claim 47, *the oxidizing gas is nitrogen dioxide (NO<sub>2</sub>) or ozone (O<sub>3</sub>).*

The Office Action asserts that inlet 25 and element 10 of figure 1 disclose an oxygen source. Inlet 25 apparently provides oxygen for generating a plasma (Fujii; col. 5, lines 39-42), and element 10 apparently represents a reaction-gas cylinder of O<sub>2</sub> (Fujii; col. 4, lines 32-34). However, amended claim 47 recites the feature that the oxidizing gas is nitrogen dioxide (NO<sub>2</sub>) or ozone (O<sub>3</sub>). It is respectfully submitted that the discussion in Fujii relating to O<sub>2</sub> does not disclose or suggest the feature of nitrogen dioxide or ozone as the oxidizing gas. Therefore, for at least this reason claim 47 is allowable over the cited reference.

Claims 48, 49, 51-54, and 118 ultimately depend from claim 47 and are therefore allowable for at least the same reasons as claim 47 is allowable.

Claims 119 and 120 have been amended to include the feature that the oxidizing gas is nitrogen dioxide (NO<sub>2</sub>) or ozone (O<sub>3</sub>), and therefore these claims are also allowable for the same reasons discussed above in regard to claim 47.

Claims 50 and 55 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of United States Patent No. 5,618,761 to Eguchi et al. (hereinafter Eguchi) and Moise. Applicants respectfully traverse.

Applicants have argued in previously filed amendments (filed on September 17, 2003, July 28, 2004, October 20, 2004, and November 29, 2005) that Moise is not prior art with respect to the present application. The Examiner has not been responded to this argument, and it is not repeated herein since it has been repeatedly presented without response from the Examiner. Applicants submit that Moise does not qualify as prior art to the present application and therefore cannot be used either alone or in combination with any other reference to reject the claims of the present application.

Therefore, since the rejections of claims 50 and 55 are based in part on Moise, which is not a valid reference, as previously presented, the rejections should be withdrawn.

Claim 56 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of United States Patent No. 5,776,254 to Yunki et al. (hereinafter Yunki). Applicants respectfully traverse.

Claim 56 depends from claim 47. The addition of Yunki fails to cure the critical deficiency discussed above with respect to Fujii as applied against claim 47, and therefore, claim 56 is allowable for at least the same reasons as claim 47 is allowable.

Claim 121 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of Yunki. Applicants respectfully traverse on the same basis as presented in the previous office action filed on November 29, 2005. The Examiner has not responded to the argument presented therein, and instead presents the rejection from the Office Action of June 29, 2005, *verbatim*. Applicants respectfully request a response to the argument, presented again below, or alternatively that the rejection be withdrawn and the claim be allowed.

Claim 121 relates to a vapor phase growth method of a metal oxide dielectric film. The method of claim 121 includes forming the metal oxide dielectric film on a substrate by introducing organometal gases and an oxidizing gas into a vacuum chamber through separate introduction inlets while heating the substrate set in the vacuum chamber. According to claim 121, the temperature of the inner walls of the vacuum chamber is equal to or higher than a temperature to allow the organometal gases to have a sufficiently high vapor pressure and equal to or lower than an organometal gas decomposition temperature, and the total pressure of the vacuum chamber is kept at  $1 \times 10^{-2}$  Torr or lower during formation of the metal oxide dielectric film on the substrate.

The Office Action admits that Fujii does not disclose the feature of the temperature of the inner walls as recited in claim 121. The Examiner asserts that Yunki discloses this feature. (Office Action; page 6, lines 8-9). Additionally, the Examiner apparently recognizes that Yunki does not disclose the specific temperature range

specified in claim 121, but counters that the precise temperature is obvious and not patentable. (Office Action; page 6, lines 11-17). However, Yunki apparently discloses a thermostatic box, the purpose of which is apparently maintaining a *uniform temperature* or *improving efficiency*. (Yunki; abstract and col. 13, lines 17-27). There is no discussion in Yunki relating to a temperature of the inner walls of the vacuum chamber being equal to or higher than a temperature to allow the organometal gases to have a sufficiently high vapor pressure, or any disclosure relating to the temperature of the walls being equal to or lower than an organometal gas decomposition temperature. The Examiner asserts that the precise temperature is within experimental range. However, there is no discussion in Yunki, or any of the other references, concerning a basis or a motivation for determining an appropriate or ideal temperature. Yunki is apparently only concerned with *uniformity of temperature* and energy efficiency. Therefore, Yunki gives no clue as to the basis for experimentation that the Examiner asserts is within the range of obviousness. Since Yunki gives no hint as to a temperature of an inner wall as recited in claim 121, and gives no suggestion as to the criteria for determining such a temperature, the combination of the references does not disclose, or suggest, all of the features of claim 121. Therefore, the rejection of claim 121 should be withdrawn.

### CONCLUSION

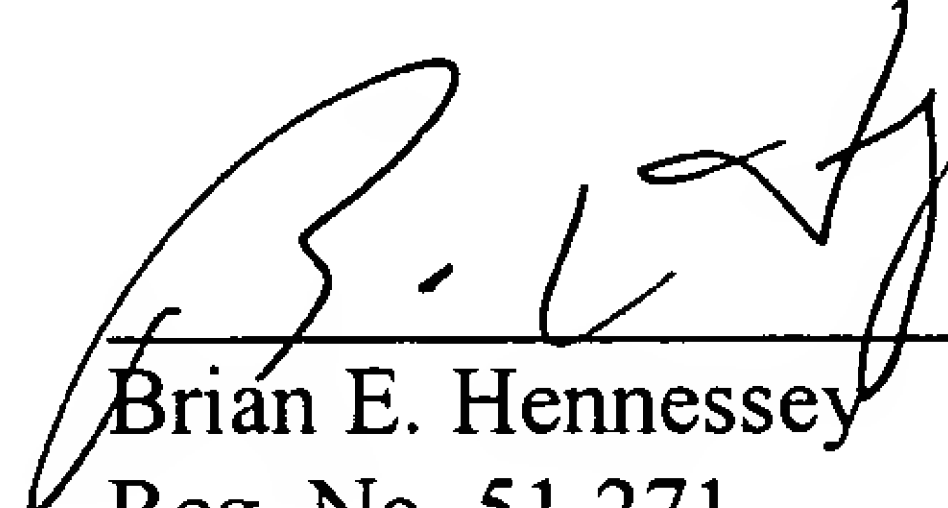
In view of the remarks set forth above, Applicants respectfully submit that the present application is in condition for allowance. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the

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Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

  
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Brian E. Hennessey  
Reg. No. 51,271

CUSTOMER NUMBER 026304

Telephone: (212) 940-8800

Fax: (212) 940-8986/8987

Docket No.: NECW 18.281 (100806-17349)

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